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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,841	01/31/2001	Christos Karamanolis	10008124-1	6264

22879 7590 06/16/2006

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EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/774,841	KARAMANOLIS ET AL.	
	Examiner	Art Unit	
	Alina N Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7 and 16-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7 and 16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed March 27, 2006. Claims 1, 3-7 and 16-25 are pending in the present application.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 27, 2006 has been entered.

Claim Rejections - 35 USC § 112

Due to Applicant's amendment, the rejection of claims 1 and 16 are now withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-7 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,212,640 issued to Abdelnur et al. (hereinafter Abdelnur) in view of USPN 6,493,768 issued to Boutcher.

(Amended) Regarding claim 1, Abdelnur teaches a file interface arrangement for providing remote file access to a data processing system via a network, the data processing system including a first processor arrangement coupled to a system input/output bus, and a network interface card that is first card coupled to the system input/output bus, wherein the first processor arrangement of the data processing system executes an operating system and a network file system (NFS) client application, the file interface arrangement comprising:

a file interface card that is a second card (figure 2);

a bus-interface circuit disposed on the file interface card and arranged to interface with the system input/output bus (figure 7: 718);

a processor arrangement coupled to the bus-interface circuit (figure 7: 713);

a memory disposed on the file interface card and coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client protocol, and a network protocol stack (figure 7: 715);

a network-interface circuit disposed on the file interface card and coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720); and

an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client remote procedure calls from

the NFS client application and send NFS-client remote procedure calls to the processor arrangement via the system bus and send remote procedure calls that are not NFS calls to the network interface card (figure 2; col. 6, lines 22-59).

However, Addelnur fails to explicitly teach a second processor arrangement disposed on the file interface card, which executes code that implements the standard NFS client protocol along with at least one non-standard extension to the NFS client protocol. Boutcher teaches a multiple processor arrangements (figures 2A:18 and 2B:28) and a non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 3, Boutcher teaches the arrangement of claim 2, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 4, Boutcher teaches the interface arrangement of claim 3, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 5, Abdelnur teaches the arrangement of claim 2, wherein the operating system includes an RPC software layer, and the interceptor module is configured and arranged to intercept packets from the RPC layer of the operating system (col. 6, lines 40-59).

Regarding claim 6, Boutcher teaches the interface arrangement of claim 5, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 7, Boutcher teaches the interface arrangement of claim 4, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

(Amended) Regarding claim 16, Abdelnur teaches a file interface card, comprising:

a card having connectors for removably coupling to a system input/output bus of a data processing system (figure 7);

at least one integrated circuit arrangement disposed on the card and coupled to the connectors, the at least one integrated circuit arrangement including, a bus-interface circuit arranged to interface with the system input/output bus (figure 7:718);

a processor arrangement coupled to the bus-interface circuit (figure 7:713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client

protocol responsive to an NFS client application executing on the data processing system and a network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 17, Boutcher teaches the file interface card of claim 16, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

(Amended) Regarding claim 18, Abdelnur teaches a data processing system, comprising:

a first processor configured to execute an operating system and an NFS client application (figure 7: 713);

a system input/output (I/O) bus coupled to the processor (figure 7:719);

a network interface card coupled to the system I/O bus, the network interface card arranged to send data received from the first processor over a network and receive data via the network (figure 7: 720);

a file interface card coupled to the system I/O bus, wherein the tile interface card implements a standard NFS client protocol responsive to the NFS client application executing on the first processor, and is adapted to send NFS requests over the network and receive NFS data via the network (figure 7: 720); and wherein the file interface card and the network interface card have respective connections to the system I/O bus (figure 7: 719).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 19, Abdelnur teaches wherein the file interface card comprises:

a bus-interface circuit arranged to interface with the system input/output bus (figure 7: 719);

a second processor coupled to the bus-interface circuit (figure 7: 713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the second processor and that implements the standard NFS client protocol and the network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the second processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 20, Abdelnur teaches the system of claim 17, further comprising an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client calls from the NFS client application and send NFS-client calls to the second processor via the system bus (figure 2; col. 6, lines 22-59).

Regarding claim 21, Boutcher teaches the system of claim 20, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 22, Boutcher teaches the system of claim 21, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 23, Abdelnur teaches the arrangement of claim 20, wherein the operating system includes an RPC software layer, and the interceptor module is configured and arranged to intercept packets from the RPC layer of the operating system (figure 2; col. 6, lines 22-59).

Regarding claim 24, Boutcher teaches the interface arrangement of claim 23, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 25, Boutcher teaches the interface arrangement of claim 19, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a metadata server (figure 4).

Response to Arguments

Applicant's arguments filed March 27, 2006 have been fully considered but they are not persuasive.

In response to Applicant's argument that the Abdelnur-Boutcher combination does not suggest of that an interceptor module sends NFS-client remote procedure calls to the second

processor arrangement on a second card and sends remote procedure calls that are not NFS calls to the network interface card on a first card as claimed, the PTO respectfully submits that this is taught in the abstract, as well as col. 6. lines 40-60 of Abdelnur.

Regarding claim 16, Applicant argues that Abdelnur-Boutcher combination fails to teach the substrate. However, claim 16 has been amended to remove the word "substrate." Therefore, this argument is invalid and will not be considered.

In response to Applicant's argument that Abdelnur's memory element does not contain code that implements the network protocol stack along with the NFS RPC code, it is noted that this feature is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to Applicant's argument that Abdelnur-Boutcher fails to teach both of a network interface card and the file interface card having respective connections to the system I/O bus, the PTO respectfully submits that, in order to network cards in general to work, they have to be connected to I/O bus. This is well known in the art of computing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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